

WHAT IS CLAIMED IS:

1. A method of selecting a profile of a digital subscriber line, the method comprising:
 - determining a number of code violations of the digital subscriber line;
 - determining a first estimated data packet throughput value associated with a first profile based on the number of code violations;
 - determining a second estimated data packet throughput value associated with a second profile based on the number of code violations; and
 - selecting a profile to be applied to the digital subscriber line based on a comparison of the first estimated data packet throughput value and the second estimated data packet throughput value.
2. The method of claim 1, further comprising applying the selected profile to the digital subscriber line.
3. The method of claim 1, wherein the selected profile is the first profile and wherein the first estimated data packet throughput value is greater than the second estimated data packet throughput.
4. The method of claim 1, further comprising determining a third estimated data packet throughput value associated with a third profile based on the number of code violations.
5. The method of claim 1, further comprising determining a plurality of estimated data packet throughput values associated with a plurality of profiles based on the number of code violations and wherein a first set of the plurality of profiles correspond to a first data line transmission speed and a second set of the plurality of profiles correspond to a second data line transmission speed.

6. The method of claim 5, wherein a third set of profiles correspond to a third data line transmission speed.

7. The method of claim 6, wherein the first data line transmission speed is 1536 kbits per second, the second data line transmission speed is 768 kbits per second., and the third data line transmission speed is 384 kbits per second.

8. The method of claim 5, wherein at least one of the first set of the plurality of profiles is an interleaved profile and another of the first set of the plurality of profiles is a non-interleaved profile.

9. The method of claim 1, further comprising generating a graphical display that illustrates the first estimated data packet throughput value, the second estimated data packet throughput value, and the number of code violations.

10. The method of claim 8, wherein the graphical display illustrates a first set of data packet throughput points for the first profile and a second set of data packet throughput points for the second profile.

11. The method of claim 1, wherein the number of code violations are measured during a selected time period.

12. The method of claim 11, wherein the selected time period is less than thirty minutes.

13. The method of claim 12, wherein the selected time period is fifteen minutes.

14. The method of claim 10, wherein the first set of data packet throughput points form a first display curve, the second set of data packet throughput points form a second display curve, and wherein the display curves are displayed in a manner to allow selection of a profile having the highest data packet throughput for a selected number of code violations.

15. The method of claim 14, wherein the number of code violations is correlated with a level of noise present on the digital subscriber line.

16. The method of claim 1, wherein the data packet throughput is a TCP/IP throughput.

17. The method of claim 16, wherein the TCP/IP throughput is determined based on laboratory testing data.

18. The method of claim 1, further comprising switching a profile from a previously applied profile to the selected profile on the digital subscriber line.

19. A method of automatically selecting profiles of digital subscriber lines, the method comprising:

periodically using an automated system to retrieve measurements of code violations for each digital subscriber line in a group of digital subscriber lines;

determining estimated data packet throughput values associated with each of a plurality of different available profiles wherein the estimated data packet throughput values are based on the measurements of code violations for each of the digital subscriber lines in the group of digital subscriber lines; and

selecting a profile for each digital subscriber line in the group of digital subscriber lines wherein each profile is selected based on the estimated data packet throughput values.

20. The method of claim 19, wherein each profile is selected that has the highest estimated data packet throughput value.

21. The method of claim 20 wherein the data packet throughput value is a TCP/IP throughput value.

22. The method of claim 1, further comprising applying the selected profile to the digital subscriber line.

23. A digital subscriber line control system comprising:

a controller including memory and a processor;

a code violation measurement unit responsive to digital subscriber lines, the code violation measurement unit to provide code violation data associated with each of the digital subscriber lines; and

a profile database to store a plurality of profiles including a first profile and a second profile;

a terminal device responsive to the controller, the terminal device configured to display a graphical report, the graphical report including a first profile curve illustrating data packet throughput values with respect to code violation data for the first profile and a second profile curve illustrating data packet throughput values with respect to code violation data for the second profile.

24. The digital subscriber line control system of claim 23, wherein the first profile curve intersects with the second profile curve.

25. The digital subscriber line control system of claim 23, wherein the memory within the controller includes a profile selection routine, the profile selection routine automatically initiates collection of code violation data and comparison of the data packet throughput values for selection of a profile from the profile database for application to each of the digital subscriber lines.